CLAIMS

What is claimed:

1. A cyanoacrylate adhesive composition for thermoplastic substrate surfaces comprising a styrenic copolymer resin, an alpha cyanoacrylate, and a high evapoation rate solvent comprised of a high evaporation rate organic co-solvent mixture, said solvent being capable of solubilizing, but non-reactive to, the styrenic copolymer resin and the thermoplastic substrate surface.

2. The adhesive composition of Claim 1 wherein the high evaporation rate organic co-solvent is selected from the group consisting essentially of isoprene, hexane, heptane, styrene liquid, xylene, toluene, methylcyclohexane, cyclohexane, 2,2-dichloropropane, methylene chloride, diisobutyl ketone, diisopropylketone, methyl isobutyl ketone, methyl isopropyl ketone, methyl cyclohexanone, cyclohexanone, isobutyl acetate, isopropyl acetate, butyl acetate, propyl acetate, ethyl acetate, diethyl ether, dimethyl ether, diethylene glycol, 2-ethylhexanol and mixtures thereof and mixtures thereof.

3. The adhesive composition of Claim 1 comprising from about 2.0% to 20.0 weight % of the alpha cyanoacrylate based on the weight of the styrenic copolymer resin in the composition.

4. The adhesive composition of Claim 3 wherein the high evaporation rate solvent is selected from the group consisting essentially of t-butyl acetate, cyclohexanone, heptane, toluene, xylene and mixtures thereof.

5. The adhesive composition of Claim 4 wherein the solvent has a Solubility Parameter of from 7.4 to 9.4.

6. The adhesive composition of Claim 1 comprising from about 2 to 10 weight % of the alpha cyanoacrylate based on the weight of the styrenic elastomeric block copolymer resin.

7. The adhesive composition of Claim 6 wherein the cyanoacylate is 1-alkyl cyanoacrylate and the alkyl group contains from 1 to 8 carbon atoms.

8. The coating composition of Claim 1 wherein the styrenic copolymer resin is selected from the group consisting essentially of styrene butadiene rubber (SBR), styrene butadiene styrene (SBS), styrene-isoprene-styrene (S-I-S), natural butyl rubber (NBR), styrene-ethylene-propylene-styrene (SEPS), styrene-ethylene-styrene (SES), and styrene-ethylene-butylene-styrene (SEBS) copolymer.

9. A process for applying a coating to a surface comprising the steps of:

(i) providing a thermoplastic elastomeric resin substrate;

(ii) contacting the elastomeric substrate surface with an effective amount of an adhesive composition comprising a styrenic copolymer resin, an alpha cyanoacrylate, and a high evapoation rate solvent; and

(iii) curing the applied composition to form an adhesive layer on the elastomeric substrate.

10. The process of Claim 9 wherein the coating composition comprises from about 1.0% to 20.0 weight % of the alpha cyanoacrylate based on the weight of the styrenic copolymer resin in the adhesive composition.

11 The process of Claim 9 wherein the alpha cyanoacrylate is in an amount of from about 1.0% to 20.0 weight % of based on the weight of the styrenic copolymer resin in the composition.

12. The process of Claim 9 wherein the high evaporation rate solvent is selected from the group comprising isoprene, hexane, heptane, styrene liquid, xylene, toluene, methylcyclohexane, cyclohexane, 2,2-dichloropropane, methylene chloride, diisobutyl ketone, diisopropylketone, methyl isobutyl ketone, methyl isopropyl ketone, methyl cyclohexanone, cyclohexanone, isobutyl acetate, isopropyl acetate, butyl acetate, propyl acetate, ethyl acetate, diethyl ether, dimethyl ether, diethylene glycol, 2-ethylhexanol and mixtures thereof and mixtures thereof.

13. The process of Claim 11 wherein the high evaporation rate solvent is selected from the group consisting essentially of t-butyl acetate, cyclohexanone, heptane, toluene, xylene and mixtures thereof.

14. The process of Claim 9 wherein styrenic copolymer resin is selected from the group consisting essentially of styrene butadiene rubber (SBR), styrene butadiene styrene (SBS), styrene-isoprene-styrene (S-I-S), natural butyl rubber (NBR), styrene-ethylene-propylene-styrene (SEPS), styrene-ethylene-styrene (SES), and styrene-ethylene-butylene-styrene (SEBS) copolymer.

15. A process for applying an adhesive to a surface of a toy item comprising the steps of:

(i) providing an elastomeric resin substrate comprised of a high molecular weight styrene-ethylene-butylene-styrene block copolymer in the form of a facial doll element;

(ii) contacting the elastomeric substrate surface with an effective amount of an adhesive composition comprising a styrenic copolymer resin, an alpha cyanoacrylate, and a high evapoation rate solvent to a surface of the facial doll element; and

(iii) curing the applied composition to form an adhesive layer on the selected surface of the doll face item.

16. The process of Claim 15 wherein the composition comprises comprising from about 0.1% to 10.0 weight % of the alpha cyanoacrylate based on the weight of the styrenic copolymer resin in the composition.

17. The process of Claim 15 wherein the cyanoacylate is 1-alkyl cyanoacrylate and the alkyl group contains from 1 to 8 carbon atoms.

18. The process of Claim 17 wherein wherein the solvent has a solubility parameter of from 7.4 to 9.4.

19. The process of Claim 18 wherein the high evaporation rate solvent is selected from the group consisting essentially of t-butyl acetate, cyclohexanone, heptane, toluene, xylene and mixtures thereof.

20. The process of Claim 18 wherein the solvent is a co-solvent mixture and the styrenic copolymer resin in the coating composition is selected from the group of copolymers consisting essentially of styrene butadiene rubber (SBR), styrene butadiene styrene (SBS), styrene-isoprene-styrene (S-I-S), natural butyl rubber (NBR), styrene-ethylene-propylene-styrene (SEPS), styrene-ethylene-styrene (SES), and styrene-ethylene-butylene-styrene (SEBS) copolymer.